AMENDMENTS TO THE CLAIMS

1. (currently amended) A system for providing dynamic feedback control of network elements in a data network, the system comprising:

a plurality of network elements, each of said network elements having a plurality operating parameters associated therewith;

a first network portion, the first network portion being administered by a first network service provider;

the first network portion including a first plurality of network elements;

a data store system operable to dynamically receive information related to a first subset of network elements, said first subset of network elements including at least one network element of the first plurality of network elements;

a policy engine system operable to dynamically analyze at least a portion of said received information based upon selected guidelines to determine whether a performance of at least a portion of said network conforms with a predetermined application specific performance criteria;

said policy engine system being further operable to automatically and dynamically report results of said analysis to an administration system for dynamically responding to said results when the performance of the portion of said network fails to conform with the predetermined application specific performance criteria;

the administration system configured ~~wherein the response is selected~~ to automatically and dynamically alter a performance policy of the portion of the network to conform with the predetermined application ~~performance~~ specific performance criteria in response to a determination that the performance of the portion of the network fails to conform with the predetermined application specific performance criteria; and

wherein the reporting is dynamically triggered by the performance of the portion of said network failing to conform with the predetermined application specific performance criteria~~, the predetermined application specific performance criteria selected from the group consisting of: a specified bandwidth usage, a specified committed information rate, a specified excess information rate, a specified committed burst size, a specified excess burst size, and a specified number of dropped packets~~.

2. (original) The system of claim 1 wherein the predetermined criteria relates to a specified bandwidth use.

3. (original) The system of claim 1 wherein the first portion of network elements includes a plurality of telecommunication switches administered by said first network service provider.

4. (original) The system of claim 1 wherein said received information includes operating parameter information related to said first subset of network elements; and

wherein said analyzing includes analyzing at least a portion of said operating parameter information to determine whether a service quality of a portion of said network conforms with acceptable service level parameters.

5. (original) The system of claim 4 further including modifying a configuration of at least one network element in response to a determination that said service quality of said network portion does not meet a specified service level requirement, wherein the modification is selected so that the at least one network element is caused to meet the specified service level requirement.

6. (original) The system of claim 5 wherein said at least one network element includes at least one network element of the first plurality of network elements.

7. (previously presented) The system of claim 1 wherein the policy engine system is further operable to analyze said information to determine billing information associated with a portion of said network.

8. (previously presented) The system of claim 1 wherein the policy engine system is further operable to analyze said information to detect any security violations related to a portion of said network.

9. (previously presented) The system of claim 1 wherein the policy engine system is further operable to analyze said information to evaluate a fault management performance of a portion of said network.

10. (previously presented) The system of claim 1 wherein the policy engine system includes an first event handling component operable to receive an event notification message relating to an error reported by a specific network element.

11. (previously presented) The system of claim 10 wherein said specific network element corresponds to a network element administered by said first service provider; and

wherein the specific network element includes a second event handling component operable to receive an event notification message relating to an adjustment of at least one operating parameter associated with the specific network element.

12. (original) The system of claim 10 further including suspending analysis of information related to said specific network element in response to reception of said error notification message.

13. (previously presented) The system of claim 1, wherein the policy engine is operable to include at least one policy for analyzing information from said first subset of network elements, and dynamically generate updated element control parameters used to affect at least one aspect of network performance.

14. (previously presented) The system of claim 13 wherein said at least one network element of the first plurality of network elements is operable to receive at least a portion of said updated element control parameters.

15. (previously presented) The system of claim 14 wherein said at least one network element is further operable to automatically and dynamically adjust at least one associated operating parameter in response to receiving at least a portion of said updated element control parameters.

16. (previously presented) The system of claim 13 wherein the administration system is operable to dynamically modify said policy in response to a determination that said policy is not effective in affecting said aspect of network performance to conform with said predefined performance criteria.

17. (currently amended) A method for providing dynamic feedback control of network elements in a data network, the data network including a plurality of network elements, each of said network elements having a plurality operating parameters associated therewith, the data network further comprising a first network portion, the first network portion being

administered by a first network service provider, the first network portion including a first plurality of network elements, the method comprising:

dynamically receiving information related to a first subset of network elements, said first subset of network elements including at least one network element of the first plurality of network elements;

dynamically analyzing at least a portion of said received information based upon selected guidelines to determine whether a performance of at least a portion of said network conforms with a predetermined application specific performance criteria~~, the predetermined application specific performance criteria selected from the group consisting of: a specified bandwidth usage, a specified committed information rate, a specified excess information rate, a specified committed burst size, a specified excess burst size, and a specified number of dropped packets~~;

automatically and dynamically reporting results of said analysis to the administration system for dynamically responding to said results when the performance of the portion of said network fails to conform with the predetermined application specific performance criteria;

automatically and ~~wherein the response is selected to~~ dynamically alter<u>ing</u> a performance policy of the portion of the network to conform with the predetermined application specific performance criteria <u>in response to a determination that the performance of the portion of the network fails to conform with the predetermined application specific performance criteria</u>;

wherein the reporting is dynamically triggered by the performance of the portion of said network failing to conform with the predetermined application specific performance criteria;

dynamically generating updated element control parameters used to affect at least one aspect of network performance;

providing at least a portion of said updated element control parameters to said at least one network element; and

automatically and dynamically adjusting at least one associated operating parameter at the at least one network element in response to receiving said updated element control parameters.

18. (original) The method of claim 17 wherein the predetermined criteria relates to a specified bandwidth use.

19. (original) The method of claim 17 wherein said received information includes operating parameter information related to said first subset of network elements, and wherein said analyzing includes analyzing at least a portion of said operating parameter information to

determine whether a service quality of a portion of said network conforms with acceptable service level parameters.

20. (original) The method of claim 19 further including modifying a configuration of said at least one network element in response to a determination that said service quality of said network portion does not meet a specified service level requirement, wherein the modification is selected so that the at least one network element is caused to meet the specified service level requirement.

21. (original) The method of claim 17 wherein said analyzing includes analyzing said information to determine billing information associated with a portion of said network.

22. (original) The method of claim 17 wherein said analyzing includes analyzing said information to detect any security violations related to a portion of said network.

23. (original) The method of claim 17 wherein said analyzing includes analyzing said information to evaluate a fault management performance of a portion of said network.

24. (original) The method of claim 17 further including receiving an event notification message relating to an error reported by a specific network element of said first plurality of network elements.

25. (original) The method of claim 24 wherein said specific network element corresponds to a network element administered by said first service provider; and

wherein the method further comprises receiving, at the specific network element, an event notification message relating to an adjustment of at least one operating parameter associated with the specific network element.

26. (original) The method of claim 24 further including suspending analysis of information related to said specific network element in response to reception of said error notification message.

27. (original) The method of claim 26 further including reporting said error to a system administrator of the first network portion.

28. (original) The method of claim 17, wherein the network further including a policy engine having at least one policy for analyzing information from selected network elements and dynamically generating updated element control parameters used to affect at least one aspect of network performance,

the method further comprising dynamically modifying said policy in response to a determination that said policy is not effective in affecting said aspect of network performance to conform with said predefined performance criteria.

29. (original) The method of claim 28 further including reporting a non-effective policy evaluation to the system administrator of the first network portion.

30. (original) The method of claim 29 further including receiving instructions from said system administrator for modifying said reported policy; and

dynamically modifying said policy in accordance with said instructions.

31. (currently amended) A system for providing dynamic feedback control of network elements in a data network, the data network including a plurality of network elements, each of said network elements having a plurality operating parameters associated therewith, the data network further comprising a first network portion, the first network portion being administered by a first network service provider, the first network portion including a first plurality of network elements, the system comprising:

a hardware network device operable to ~~means for~~ dynamically ~~receiving~~ receive information related to a first subset of network elements, said first subset of network elements including at least one network element of the first plurality of network elements;

means for dynamically analyzing at least a portion of said received information based upon selected guidelines to determine whether a performance of at least a portion of said network conforms with a predetermined application specific performance criteria~~, the predetermined application specific performance criteria selected from the group consisting of: a specified bandwidth usage, a specified committed information rate, a specified excess information rate, a specified committed burst size, a specified excess burst size, and a specified number of dropped packets~~;

means for automatically and dynamically reporting results of said analysis to the administration system for dynamically responding to said results when the performance of the

portion of said network fails to conform with the predetermined application specific performance criteria;

automatically and ~~wherein the response is selected to~~ dynamically altering a performance policy of the portion of the network to conform with the predetermined application specific performance criteria in response to a determination that the performance of the portion of the network fails to conform with the predetermined application specific performance criteria;

wherein the reporting is dynamically triggered by the performance of the portion of said network failing to conform with the predetermined application specific performance criteria;

means for dynamically generating updated element control parameters used to affect at least one aspect of network performance;

means for providing at least a portion of said updated element control parameters to said at least one network element; and

means for automatically and dynamically adjusting at least one associated operating parameter at the at least one network element in response to receiving said updated element control parameters.

32. (original) The system of claim 31 wherein the predetermined criteria relates to a specified bandwidth use.

33. (original) The system of claim 31 wherein said received information includes operating parameter information related to said first subset of network elements, and wherein said analyzing mean includes means for analyzing at least a portion of said operating parameter information to determine whether a service quality of a portion of said network conforms with acceptable service level parameters.

34. (original) The system of claim 33 further including means for modifying a configuration of said at least one network element in response to a determination that said service quality of said network portion does not meet a specified service level requirement, wherein the modification is selected so that the at least one network element is caused to meet the specified service level requirement.

35. (original) The system of claim 31 wherein said analyzing means includes means for analyzing said information to determine billing information associated with a portion of said network.

36. (original) The system of claim 31 wherein said analyzing means includes means for analyzing said information to detect any security violations related to a portion of said network.

37. (original) The system of claim 31 wherein said analyzing means includes means for analyzing said information to evaluate a fault management performance of a portion of said network.

38. (original) The system of claim 31 further including means for receiving an event notification message relating to an error reported by a specific network element of said first plurality of network elements.

39. (original) The system of claim 38 wherein said specific network element corresponds to a network element administered by said first service provider; and

wherein the system further comprises means for receiving, at the specific network element, an event notification message relating to an adjustment of at least one operating parameter associated with the specific network element.

40. (original) The system of claim 38 further including means for suspending analysis of information related to said specific network element in response to reception of said error notification message.

41. (original) The system of claim 40 further including means for reporting said error to a system administrator of the first network portion.

42. (original) The system of claim 31, wherein the network further including a policy means having at least one policy for analyzing information from selected network elements and dynamically generating updated element control parameters used to affect at least one aspect of network performance,

the system further comprising means for dynamically modifying said policy in response to a determination that said policy is not effective in affecting said aspect of network performance to conform with said predefined performance criteria.

43. (original) The system of claim 42 further including means for reporting a non-effective policy evaluation to the system administrator of the first network portion.

44. (original) The system of claim 43 further including means for receiving instructions from said system administrator for modifying said reported policy; and

means for dynamically modifying said policy in accordance with said instructions.